

## REQUEST FOR RECONSIDERATION

Claims 1-7 are active in the case.

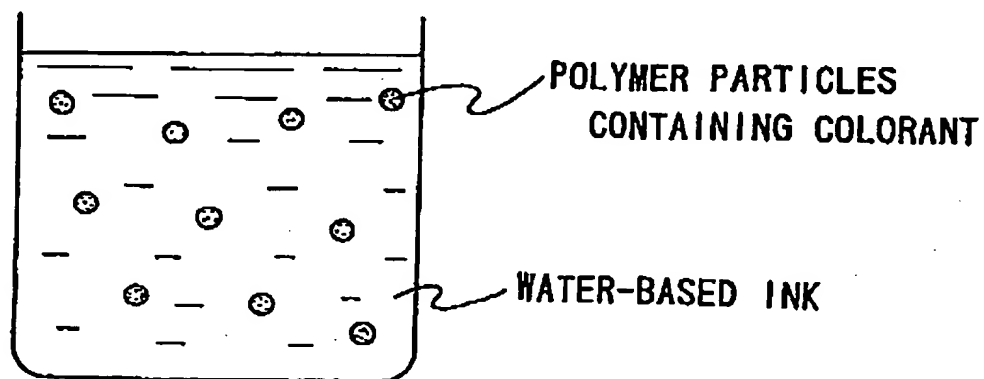
The Examiner has objected to the title as not descriptive. The title has been amended as per the Examiner's suggestion.

Claims 1-4 are rejected under 35 U.S.C. §112, second paragraph as being indefinite. The Examiner characterizes the phrase "fine polymer particles" in Claim 1 as a relative term which renders the claims indefinite. Claim 1 has been amended to delete "fine" and to define the polymer particles by an average particle diameter of 20 to 200 nm. The claims were further considered indefinite, because it was not clear what was incorporated into the polymer particles. The claims have been amended to clearly specify that the aqueous dispersion has two separate parts (A) polymer particles having an average particle diameter of 20 to 200 nm, which particles contain a colorant and (B) at least one polyalkylene oxide derivative...". The description of the aqueous dispersion is clearly set forth on page 13, lines 19 through 22 of the specification. The claims meet the requirements of 35 U.S.C. § 112.

Claims 1 through 4 are rejected under 35 U.S.C. §102(b) as being anticipated by Fague.

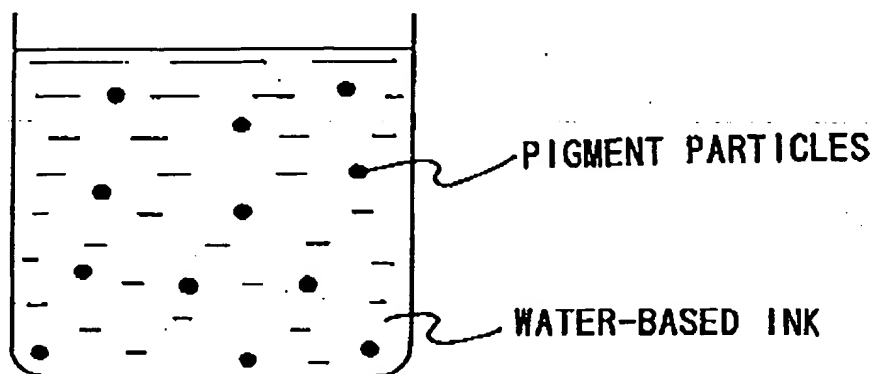
The claims are not anticipated by Fague for the following reasons. The water-based ink of the present claims is illustrated by the following Figure 1.

**FIG. 1**



As is clear from Figure 1, the fine polymer particles of the present invention contain a colorant and, along with a polyalkylene oxide derivative, are dispersed to form a water-based ink. In contrast, Figure 2 illustrates the water-based inks of the cited references, Fague, Kappele, Tomita (JP 01-230685) and Hattori (JP 06-184487).

FIG. 2



As is clear from Figure 2, the cited references disclose a water-based ink which is an aqueous dispersion containing pigment particles and polyalkylene glycols of various types. The water-based ink of the cited references do not show polymer particles containing a colorant, as shown in Figure 1, but only the pigment particles dispersed in the aqueous carrier with various polyalkylene glycols as shown in Figure 2.

Further, Fague shows the addition of low molecular weight polyethylene glycol cosolvent to the water-based ink. However, the water-based ink of the present claims does not contain polyethylene glycol, because  $R^1$  is defined as a monovalent aliphatic hydrocarbon group, a monovalent alicyclic hydrocarbon group or a monovalent aromatic hydrocarbon group. The water-based ink of the present invention is completely different from that of Fague and, therefore, the claims are not anticipated by Fague.

Claims 1 through 3 are rejected under 35 U.S.C. §102(b) as being anticipated by Kappele et al., Tomita et al. (JP 01-230685) or Hattori (JP 06-24487). As discussed above in

the response to the rejection over Eague, none of the other references show the water-based ink as illustrated in Figure 1, which shows an aqueous dispersion of polymer particles containing a colorant and a polyalkylene oxide derivative also contained in the dispersion, but only show water-based inks as illustrated by Figure 2, which contain only pigment particles dispersed in polyalkylene glycols and derivatives thereof. As was discussed above in the response to the rejection over Eague, the water-based ink of the present invention does not contain polyalkylene glycols, because  $R^1$  and  $R^3$  are defined so as to eliminate hydrogen as being a substitution group on compounds (I) and (III) of Claim 1. The water-based ink of the present claims is completely different from that of the cited references and, therefore, the claims are not anticipated by the references.

Claim 4 is rejected under 35 U.S.C. §102(b) as anticipated by or, and the alternative, 35 U.S.C. § 103(a) as being unpatentable over Kappele, Tomita et al (JP 01-230685) or Hattori (JP 06-184487).

Claim 4 is not anticipated by or obvious over the references for the following reasons. As is clear from the arguments made above with regard to the rejection over Claims 1 through 3, the water-based ink of the present claims is completely different from the water-based ink of the references, therefore, Claim 4 cannot be anticipated by the references. Further, the references do not disclose or suggest the use of polymer particles containing a colorant in a water-based ink as in the present claims. In the water-based ink of the present claims polymer particles containing a colorant are used together with specific polyalkylene oxide derivatives and thereby produce excellent inking properties, such as, print density, print durability, character quality, dry resistance and water resistance as set forth at page 26, Table 2 of the specification. Therefore, Claim 4 is not anticipated by or obvious over the references.

It is submitted that Claims 1-7 are allowable and such action is respectfully requested.

Respectfully submitted,

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MARKED-UP COPY OF AMENDMENT

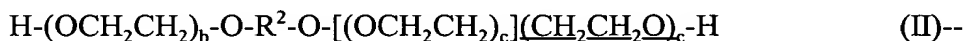
IN THE SPECIFICATION

Please amend the title as follows:

--WATER-BASED INK WITH POLYOXYALKYLENE OXIDE DERIVATIVES--

Please amend the specification as follows:

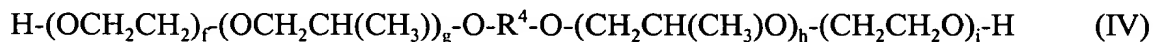
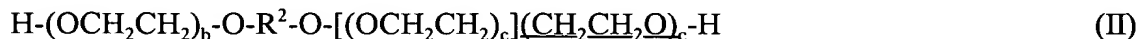
--The Formula (II) at page 3, line 12:



IN THE CLAIMS

Please amend the claims as follows:

--1. (Amended) A water-based ink comprising (A) an aqueous dispersion of [fine] polymer particles having an average particle diameter of 20 to 200 nm, which particles contain [containing] a colorant, and (B) at least one polyalkylene oxide derivative selected from the group consisting of the compounds represented by the following formulae:



wherein each of **a** and **d** is independently a number of 10 to 40; each of **b** and **c** is independently a number of 5 to 20; **e** is a number of 1 to 3; **f** is a number of 5 to 20; each of **g** and **h** is independently a number of 0 to 4, wherein **g** + **h** is a number satisfying 1 to 4; **i** is a number of 5 to 20; each of **R**<sup>1</sup> and **R**<sup>3</sup> is independently a monovalent aliphatic hydrocarbon

group having 2 to 6 carbon atoms, a monovalent alicyclic group having 3 to 6 carbon atoms, or a monovalent aromatic group having 6 to 12 carbon atoms; R<sup>2</sup> is a divalent aliphatic group having 3 to 6 carbon atoms, a divalent alicyclic group having 3 to 6 carbon atoms, or a divalent aromatic group having 6 to 12 carbon atoms; R<sup>4</sup> is a divalent aliphatic group having 2 to 6 carbon atoms, a divalent alicyclic group having 3 to 6 carbon atoms, or a divalent aromatic group having 6 to 12 carbon atoms; and the oxyethylene chain and the oxypropylene chain described in the formulae (III) and (IV) may be added in random or block forms.

2. (Amended) The water-based ink according to Claim 1, wherein [the] said colorant is [an organic] a hydrophobic dye or a pigment [or carbon black].

5-7. (New).--